## Ancillary Services

### Lewiston
### Ancillary Services

| | |
|---|---|
| Spinning Reserve | No |
| Non-Spinning Reserve | No |
| Replacement Reserve | No |
| Regulation/Load Following | No |
| Black Start | Yes |
| Voltage Support | No |

## Generators

### Lewiston Generators

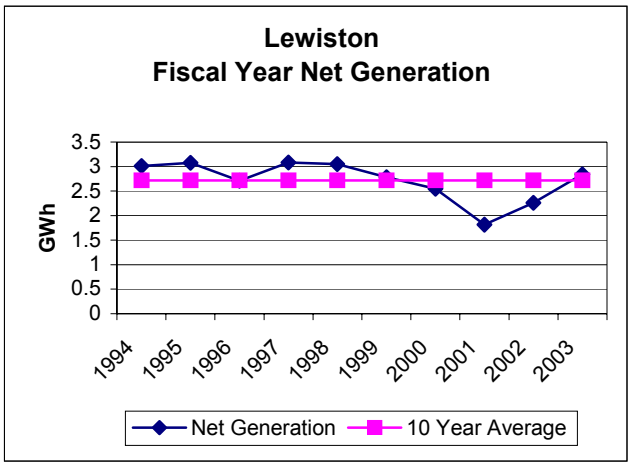
Existing Number and Capacity

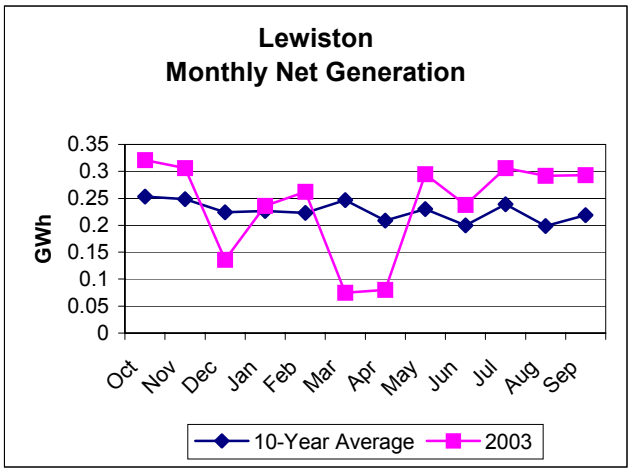
| Unit # | Original Capacity (kW) | Capacity Increased (kW) | Present Capacity (kW) |
|---|---|---|---|
| LN1 | 350 | 0 | 350 |
| 1 Unit | 350 | 0 | 350 |

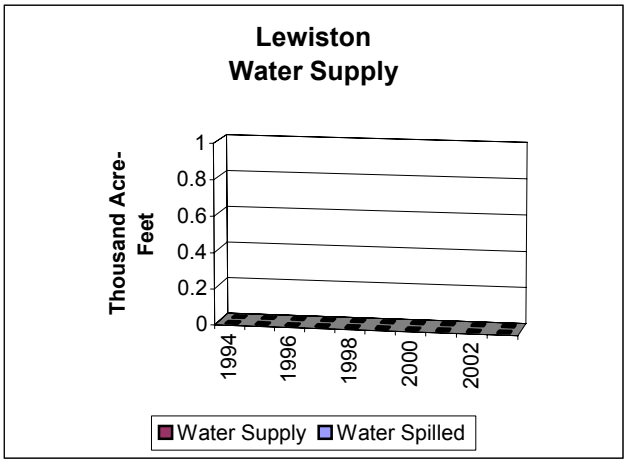
The maximum operational capacity is 504 kW.

**Lewiston Powerplant**
**Other**

## Generation

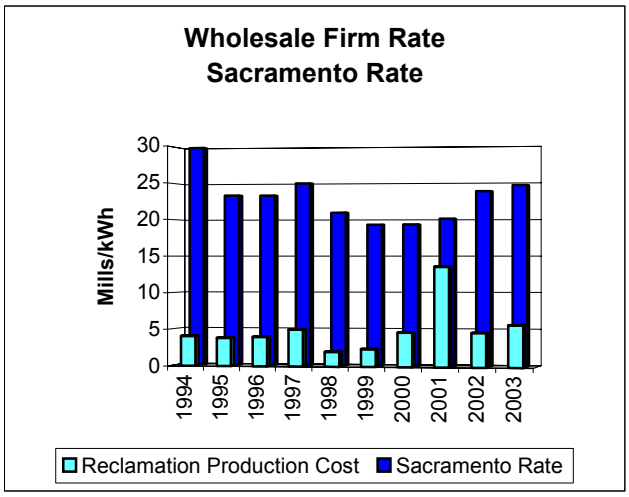


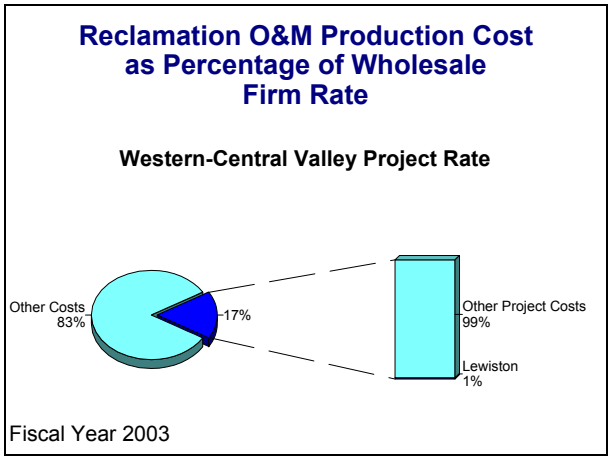



## Prime Laboratory Benchmarks

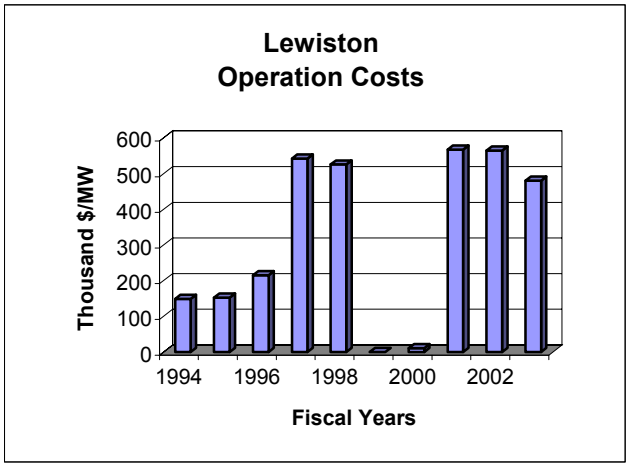
### Benchmark 1
### Wholesale Firm Rate

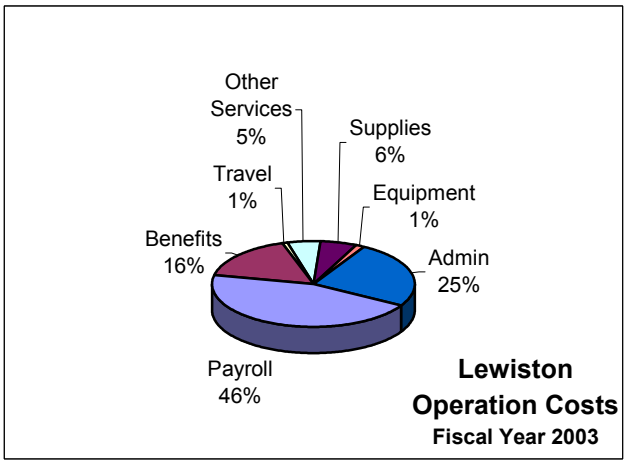


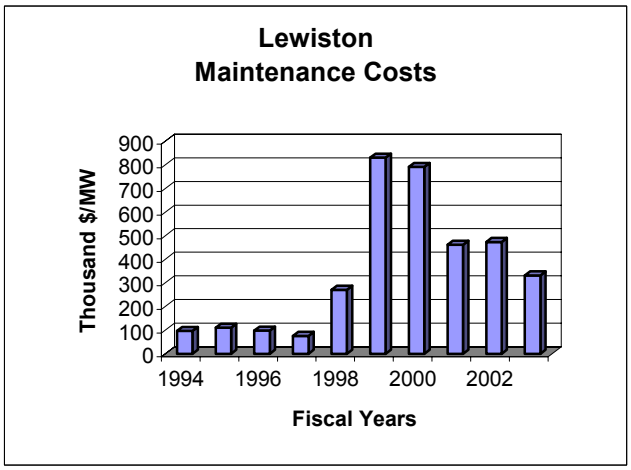

### Benchmark 2
### Reclamation's Production Cost as Percentage of Wholesale Firm Rate

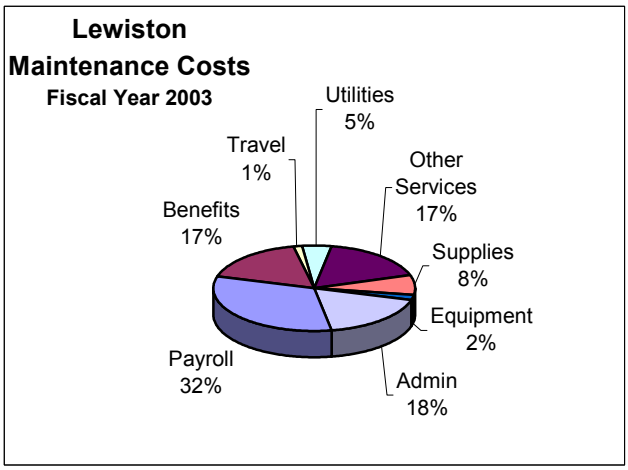


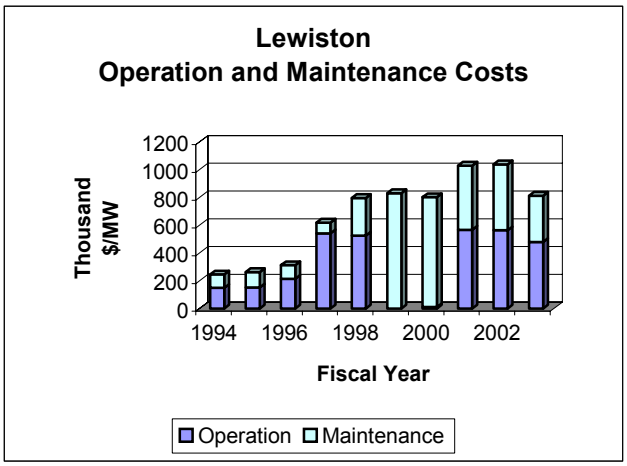
## Benchmark 3
## Production Cost

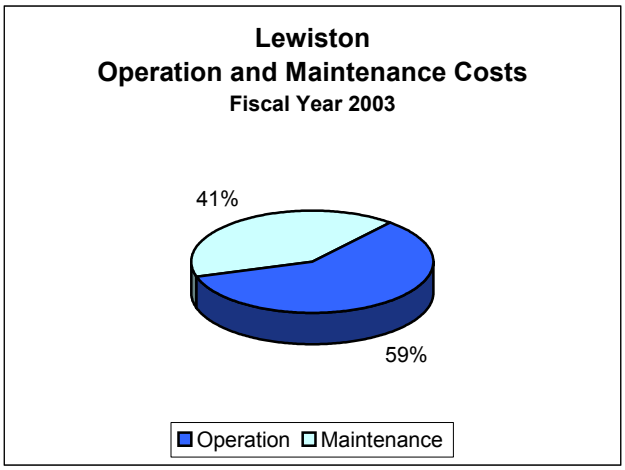


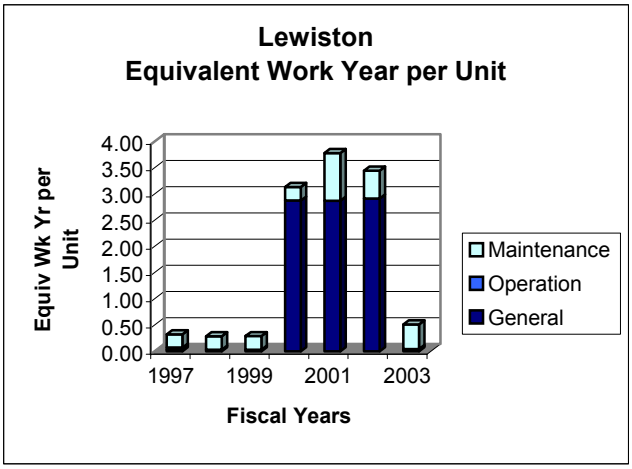



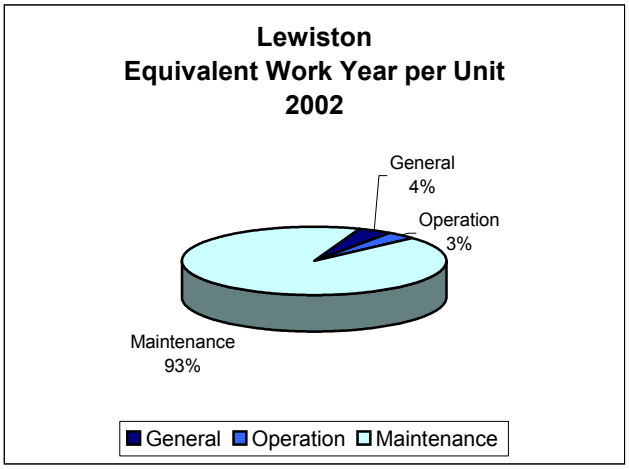



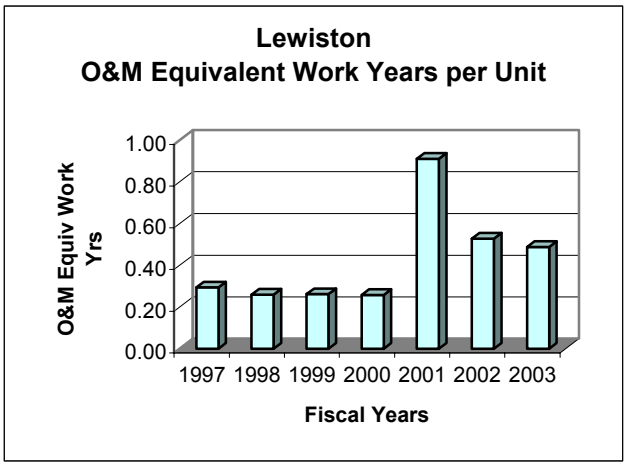
# Benchmark 4
# Workforce Deployment

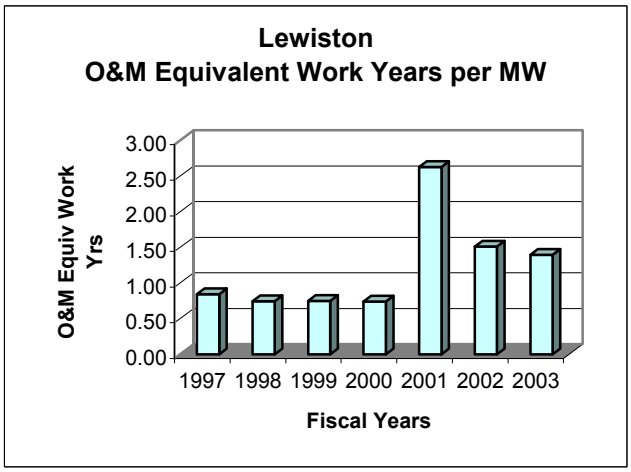
## Lewiston
## 2003 Equivalent
## Work Year Levels

| | Equiv Work Year Charged to Powerplant | Leave Additive | Denver and Washington Equiv Work Year Additive | Total Equiv Work Year Allocated to Powerplant | Total Equiv Work year per Generating Unit | Total Equiv Work Year per Megawatt |
|---|---|---|---|---|---|---|
| General | 0 | 0 | 0.02 | 0.02 | 0.02 | 0.1 |
| Operation | 0.02 | 0 | 0 | 0.02 | 0.02 | 0.0 |
| Maintenance | 0.42 | 0.05 | 0 | 0.47 | 0.47 | 1.3 |
| Total Staffing | 0.44 | 0.05 | 0.02 | 0.51 | 0.51 | 1.46 |

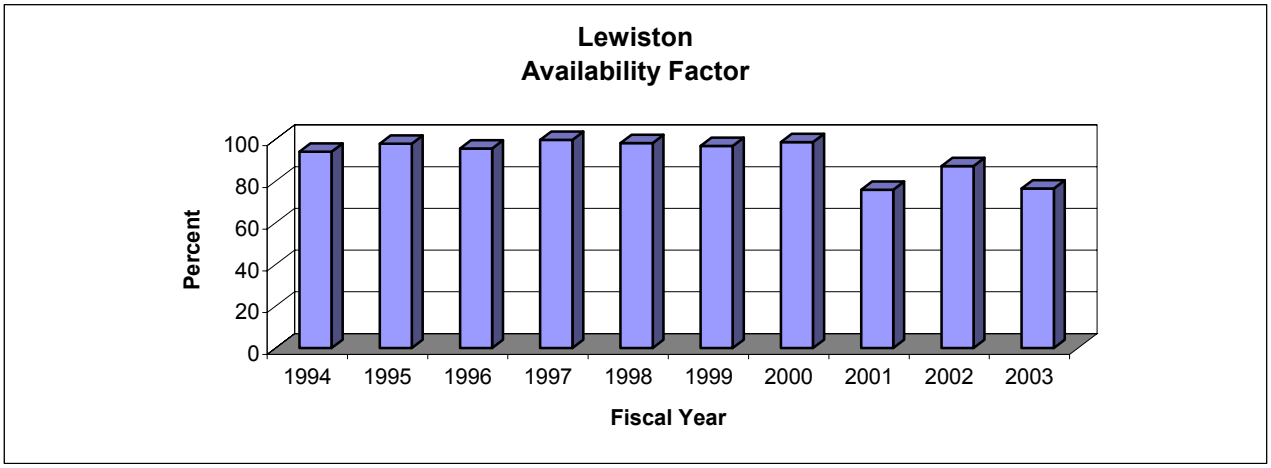


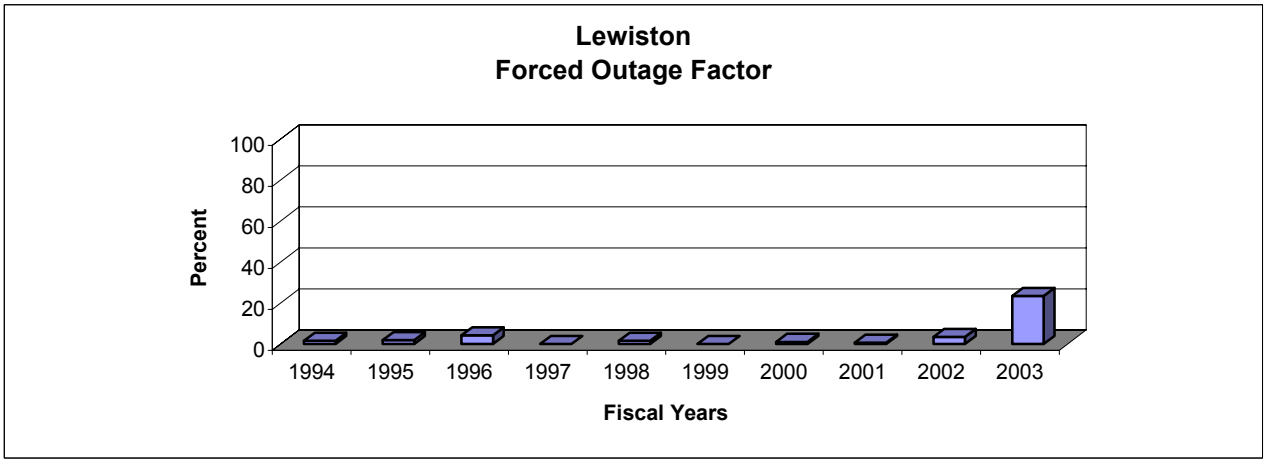



## Benchmark 5
## Availability Factor

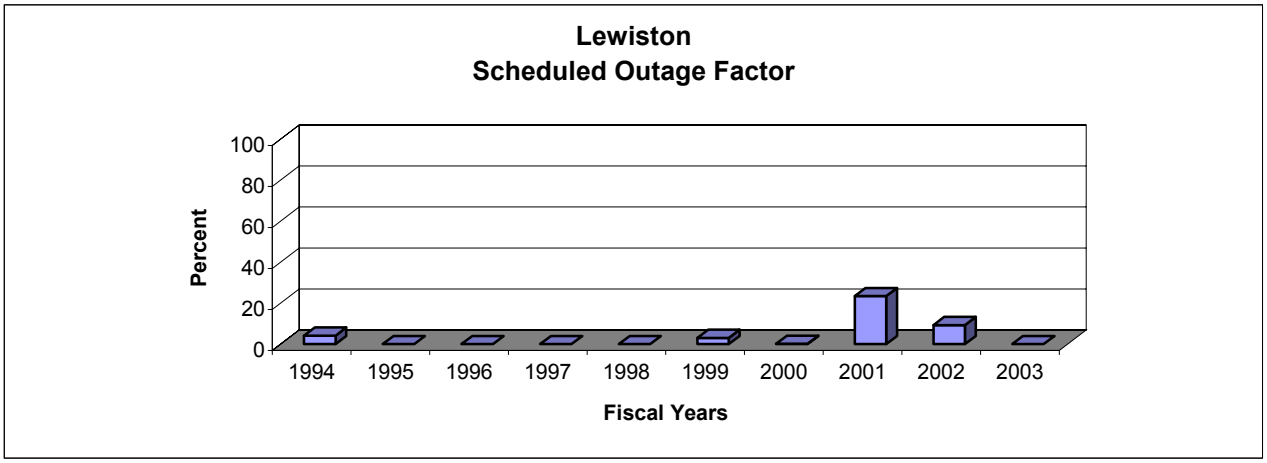



## Benchmark 6
## Forced Outage Factor

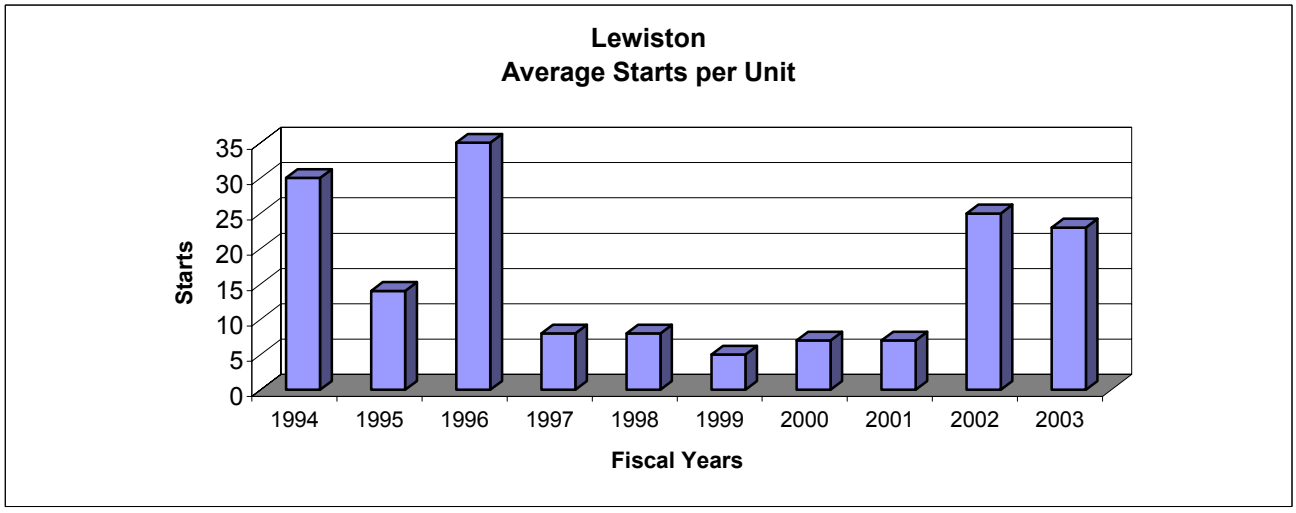



FY 03 – Several forced outages were the result of severe weather (lightning storms) and problems in the Trinity County Public Utility District distribution system. The remoteness of the site and the age of the equipment also contributed to the length of these outages.

## Benchmark 7
## Scheduled Outage Factor




## Starts



# Benchmark Data Comparison

| Fiscal Year 2003 | Lewiston Powerplant | Total Reclamation Average | Industry Average | Best Performers |
|---|---|---|---|---|
| **Wholesale Firm Rate Mills/kWh** | 24.6 | *23.1 | Not Available | Not Available |
| **Production Cost as Percentage of Wholesale Firm Rate** | 0.2% | 12.0% | Not Applicable | Not Applicable |
| **O&M Cost $/MWh** | 100.1 | 2.7 | Not Applicable | 1.1 |
| **O&M Costs $/MW** | 812,347 | 7,315 | Not Applicable | 3,108 |
| **O&M Equiv Work Year per MW** | 1.4 | 0.04 | Not Available | 0.01 |
| **Availability Factor** | 76.5 | 83.6 | **88.9 | 99.1 |
| **Forced Outage Factor** | 23.5 | 1.5 | **2.4 | 0.0 |
| **Scheduled Outage Factor** | 0.0 | 14.9 | **8.7 | 0.0 |

*Weighted by Net Generation
**2002 NERC Average

At 350 kW, Lewiston is the smallest powerplant in Reclamation. As a result, the cost indicators are out of line compared to 40 MW units and larger.

Several forced outages were the result of severe weather (lightning storms) and problems in the Trinity County Public Utility District distribution system. The remoteness of the site and the age of the equipment also contributed to the length of these outages.